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10/813,215	03/31/2004	Takashi Furukawa	SON-2965	3882

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EXAMINER	
DANG, HUNG Q	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/813,215	FURUKAWA ET AL.	
	Examiner	Art Unit	
	Hung Q. Dang	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 August 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18,23-31,33-42,44 and 45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18,23-31,33-42,44 and 45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 08/10/2009 have been fully considered but they are not persuasive.

On pages 12 and 16, Applicant argues that Mishima and Suzuki fail to disclose the limitations of the claims because Suzuki fails to disclose a calculation for acceleration and deceleration.

In response, Examiner respectfully disagrees.

First of all, with respect to claim 18, at least in column 6, lines 42-45, Suzuki discloses at a transition to normal playback an acceleration is calculated to perform deceleration accordingly by rearranging data to obtain the correct order of reproduced image data. Therefore, if going from a high-speed reproduction to normal reproduction, a calculation must be involved (because the task of ordering, rearranging, and determining how many frames should be outputted per a unit of time requires processing as described in the quoted passage of Suzuki) to achieve a deceleration to reproduction at normal speed.

With respect to claim 23, Examiner respectfully submits that, at least in column 16, lines 60 – column 17, line 8, Mishima discloses at a time of special playback comprising high speed playback (see column 29, lines 15-17), at least calculations need to be performed to determine the data to be accessed such that the amount of accessed data should be decreases to achieve a smooth special playback. This also described at least in column 15, lines 58-64 so as to determine which frames should be

outputted and how many of such frames should be outputted per a unit of time with respect to the set playback speed, thus, to achieve the acceleration from normal speed to high speed. All of these processing tasks clearly correspond to the claimed calculation. Furthermore, calculations regarding decoding low resolution for high speed playback are also disclosed by Mishima at least in column 20, lines 38-43.

With respect to claims 34 and 45, Examiner respectfully submits that Applicant's arguments are not persuasive for the same reason as discussed in claim 23 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 18 and 23-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mishima et al (6,009,236) and further in view of Suzuki (7,058,208).

Regarding claim 18, Mishima et al disclose a reproducing device adapted to play back video data recorded on an information recording medium, the reproducing device comprising:

- a controller adapted to set reproduction speeds of the video data (Col 37, line 36 "special playback is performed"), said reproduction speeds including a normal playback and a high-speed playback, said high-speed playback being at a higher speed than said normal playback (Col 29, lines 54-55 "a 15 times speed special playback picture can be obtained");

- a drive adapted to read out said video data from the information recording medium (Col 27, lines 53-55 “video information read from the recording medium is inputted from an input terminal 20 to a demodulator 21”), said video data including main track data being read out during said normal playback and low resolution data being read out during said high-speed playback (Col 20, lines 39-43 “At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the device so that a rough picture can be decoded by decoding only the coded data of low resolution”); and
- a decoder adapted to generate an output image from said video data, said output image being viewable on a screen (Fig. 10, item 782 “Video Signal Decoder” and item 784 “Monitor”),
- wherein, during said normal playback, said screen displays a frame of said main track data (Col 20, lines 22-28 “At the time of the normal playback, the coded data of the low resolution component and the coded data of the high resolution component which is the differential component between the low resolution portion and the data before being thinned into a low resolution are synthesized so that a picture with a complete resolution component can be decoded”),
- wherein, during said high-speed playback, said screen is divided into areas (Col 37, lines 44-47 “the P4 picture is played back in the area 1, the P3 picture is played back in the area 2, the P2 picture is played back in the area

3, and the P1 picture is played back in the area 4 and the I picture in the area 5"), said areas of said screen partially displaying different frames of said low resolution data (Col 20, lines 39-43 "At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the device so that a rough picture can be decoded by decoding only the coded data of low resolution" and Figs 26A-26D), and

- wherein, at a transition from said high-speed playback to said normal playback (Col 51, lines 42-43 "normal continuous playback or the like is inputted to the mode switcher 76 from the microcomputer"), but do not explicitly disclose a calculation for the acceleration and deceleration.

Suzuki teaches calculating an acceleration in accordance with time required to read out and decode said main track data (Col 7, lines 2-7 "the data is intermittently read out from the disc 113 by the predetermined amount in the normal reproduction mode. At the time of search reproduction, the data is continuously read out from the magneto-optical disc 113. In this manner, the data is reproduced at a rate several times higher than the rate in the normal reproduction mode") so as to perform deceleration at a deceleration corresponding to said calculated acceleration (Col 6, lines 42-50 "at the time of normal reproduction, the CPU 122 rearranges, in the order shown by reference numeral 301 in FIG. 3, the reproduced data decoded in the order indicated by reference numeral 302 in FIG. 3 and stored in the memory 205, and outputs the rearranged data. Thus, the order of reproduced image data is changed by using the memory 205 and,

accordingly, the memory 205 is capable of storing several frames (ten frames in this embodiment) of decoded image data").

As taught by Suzuki, calculating an acceleration factor allows the reproducing device to determine the appropriate data reading rate for the high-speed reproduction, and to return to a normal reading rate when high-speed reproduction is completed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mishima et al in order to include a calculation of acceleration factor and to use that calculation for accelerated and normal playback transitions.

Regarding claim 23, Mishima et al disclose a reproducing device adapted to play back video data recorded on an information recording medium, the reproducing device comprising:

- a controller adapted to set a reproduction speed of the video data (Col 37, line 36 "special playback is performed"), said reproduction speed during a high-speed playback being higher than said reproduction speed during a normal playback (Col 29, lines 54-55 "a 15 times speed special playback picture can be obtained");
- a drive adapted to read out said video data from the information recording medium (Col 27, lines 53-55 "video information read from the recording medium is inputted from an input terminal 20 to a demodulator 21"), said video data including main track data being read out during said normal

playback and low resolution data being read out during said high-speed playback (Col 20, lines 39-43 "At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the device so that a rough picture can be decoded by decoding only the coded data of low resolution"); and

- a decoder adapted to generate an output image from said video data, said output image being viewable on a screen (Col 20, lines 22-28 "At the time of the normal playback, the coded data of the low resolution component and the coded data of the high resolution component which is the differential component between the low resolution portion and the data before being thinned into a low resolution are synthesized so that a picture with a complete resolution component can be decoded"),

Mishima et al also disclose wherein, at a transition from said normal playback to said high-speed playback, an acceleration in accordance with time required to read out and decode said low resolution data is calculated so as to perform acceleration at said calculated acceleration (Col 16, lines 60-64 "at the time of the special playback, the data to be accessed decreases so that a smooth special playback can be obtained by gradually decreasing the data amount to be accessed at the time of the special playback").

Mishima et al also disclose the screen divided into a number of areas (Col 37, lines 44-47 'the P4 picture is played back in the area 1, the P3 picture is played back in the area 2, the P2 picture is played back in the area 3, and the P1 picture is

played back in the area 4 and the I picture in the area 5"), but does not explicitly disclose the number during high-speed playback being variable in accordance with said reproduction speed.

Suzuki teaches a reproducing device adapted to play back video data recorded on an information recording medium wherein the screen is divided into a number of areas during high-speed playback, that number being variable in accordance with the reproduction speed (Col 9, lines 21-24 "the ability of the recording and reproducing system and the memory capacity may be changed as desired to perform search reproduction at a speed other than the above-mentioned speed" and Col 9, lines 28-32 "each of successive ten frames stored in the memory is divided into ten regions, and respective portions of the ten frames of reproduced image data are combined to form one frame of image data for tenfold-speed search").

As taught by Suzuki, a screen being divided into a number of areas during high-speed playback, the number being variable in accordance with the reproduction speed, is well known, and provides the user with a visual indication of both the frames being played at high speed and of the rate of reproduction, and provides a smoothly moving search image.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mishima et al in order to include a variable number of areas being displayed during high-speed reproduction in accordance with the reproduction speed.

Regarding claim 24, Mishima et al disclose a reproducing device adapted to play back video data recorded on an information recording medium wherein each of said areas partially displays different frames of said low resolution data (Col 37, lines 44-47 "the P4 picture is played back in the area 1, the P3 picture is played back in the area 2, the P2 picture is played back in the area 3, and the P1 picture is played back in the area 4 and the I picture in the area 5").

Regarding claim 25, Mishima et al disclose a reproducing device adapted to play back video data recorded on an information recording medium wherein said screen displays a frame of said main track data during said normal playback (Col 20, lines 22-28 "At the time of the normal playback, the coded data of the low resolution component and the coded data of the high resolution component which is the differential component between the low resolution portion and the data before being thinned into a low resolution are synthesized so that a picture with a complete resolution component can be decoded").

Regarding claim 26, Mishima et al disclose a reproducing device adapted to play back video data recorded on an information recording medium wherein said reproduction speed is set at a predetermined acceleration (Col 16, lines 60-64 "at the time of the special playback, the data to be accessed decreases so that a smooth special playback can be obtained by gradually decreasing the data amount to be accessed at the time of the special playback").

Regarding claim 27, Mishima et al disclose a reproducing device adapted to play back video data recorded on an information recording medium wherein said video

data are read out at said reproduction speed (Col 20 lines 22-27 “At the time of the normal playback, the coded data of the low resolution component and the coded data of the high resolution component which is the differential component between the low resolution portion and the data before being thinned into a low resolution are synthesized so that a picture with a complete resolution component can be decoded” and lines 39-43 “At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the device so that a rough picture can be decoded by decoding only the coded data of low resolution” and Col 16, lines 60-64 “at the time of the special playback, the data to be accessed decreases so that a smooth special playback can be obtained by gradually decreasing the data amount to be accessed at the time of the special playback”).

Regarding claim 28, Mishima et al disclose a reproducing device adapted to play back video data recorded on an information recording medium wherein a time period to decode said low resolution data is shorter than a time period to decode said main track data (Col 55, lines 25-29 “when only the low resolution component is arranged in summary at the front of the GOP, the ratio of the L component occupying the whole largely reduces so that an allowance can be made in the reading speed from the medium so that the skip search can be easily realized”).

Regarding claim 29, Mishima et al disclose a reproducing device adapted to play back video data recorded on an information recording medium wherein said main track data and said low resolution data are on said information recording medium (Col 20 lines 22-27 “At the time of the normal playback, the coded data of the low resolution

component and the coded data of the high resolution component which is the differential component between the low resolution portion and the data before being thinned into a low resolution are synthesized so that a picture with a complete resolution component can be decoded" and lines 39-43 "At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the device so that a rough picture can be decoded by decoding only the coded data of low resolution" and Col 1, lines 14-16 "a digital video signal record and playback device for recording and playing back on a medium such as an optical disc").

Regarding claim 30, Mishima et al disclose a reproducing device adapted to play back video data recorded on an information recording medium wherein said main track data and said low resolution data are intermittently recorded on a physically same track of said information recording medium (Col 55, lines 11-20 "FIG. 65 is a view showing an example of the result of data constitution… In the sequence c, symbol C denotes a component coded by a rough quantization, and A a residual component by the rough quantization, respectively").

Regarding claim 31, Mishima et al disclose a reproducing device adapted to play back video data recorded on an information recording medium wherein, at a transition from said high-speed playback to said normal playback (Col 51, lines 42-43 "normal continuous playback or the like is inputted to the mode switcher 76 from the microcomputer"), but do not explicitly disclose a calculation for the acceleration and deceleration.

Suzuki teaches calculating an acceleration in accordance with time required to read out and decode said main track data (Col 7, lines 2-7 “the data is intermittently read out from the disc 113 by the predetermined amount in the normal reproduction mode. At the time of search reproduction, the data is continuously read out from the magneto-optical disc 113. In this manner, the data is reproduced at a rate several times higher than the rate in the normal reproduction mode”) so as to perform deceleration at a deceleration corresponding to said calculated acceleration (Col 6, lines 42-50 “at the time of normal reproduction, the CPU 122 rearranges, in the order shown by reference numeral 301 in FIG. 3, the reproduced data decoded in the order indicated by reference numeral 302 in FIG. 3 and stored in the memory 205, and outputs the rearranged data. Thus, the order of reproduced image data is changed by using the memory 205 and, accordingly, the memory 205 is capable of storing several frames (ten frames in this embodiment) of decoded image data”).

As taught by Suzuki, calculating an acceleration factor allows the reproducing device to determine the appropriate data reading rate for the high-speed reproduction, and to return to a normal reading rate when high-speed reproduction is completed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mishima et al in order to include a calculation of acceleration factor and to use that calculation for accelerated and normal playback transitions.

Regarding claim 33, Mishima et al disclose a reproducing device adapted to play back video data recorded on an information recording medium wherein said screen

has a fixed arrangement when acceleration and deceleration are terminated so as to perform normal playback, said fixed arrangement being in accordance with said reproduction speed presently existing (Col 15, lines 13-16 " at the time of the normal playback, the data is rearranged on the basis of the address with the result that disadvantage resulting from the division of data can be prevented when played back").

Regarding claim 34, Mishima et al disclose a reproducing method for playing back video data recorded on an information recording medium, the method comprising the steps of:

- setting a reproduction speed of the video data (Col 37, line 36 "special playback is performed"), said reproduction speed during a high-speed playback being higher than said reproduction speed during a normal playback (Col 29, lines 54-55 "a 15 times speed special playback picture can be obtained");
- reading out said video data from the information recording medium (Col 27, lines 53-55 "video information read from the recording medium is inputted from an input terminal 20 to a demodulator 21"), said video data including main track data being read out during said normal playback and low resolution data being read out during said high-speed playback (Col 20, lines 39-43 "At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the device so that a rough picture can be decoded by decoding only the coded data of low resolution");

- wherein an output image from said video data is viewable on said screen (Col 33, lines 38-40 “the data which can be read is decoded in units of macroblocks and is outputted as a high speed playback picture”).

Mishima et al also disclose

- calculating an acceleration in accordance with time required to read out and decode said low resolution data, said acceleration being calculated at a transition from said normal playback to said high-speed playback (Col 16, lines 60-64 “at the time of the special playback, the data to be accessed decreases so that a smooth special playback can be obtained by gradually decreasing the data amount to be accessed at the time of the special playback”); and
- performing acceleration at said calculated acceleration (Col 17, lines 3-5 “regarding the data divided by a plurality of dividing means, the amount of data to be read can be adjusted in accordance with the special playback speed to cope with a wide scope of the special playback speed”).

Mishima et al further disclose the screen divided into a number of areas (Col 37, lines 44-47 ‘the P4 picture is played back in the area 1, the P3 picture is played back in the area 2, the P2 picture is played back in the area 3, and the P1 picture is played back in the area 4 and the I picture in the area 5”), but does not explicitly disclose the number during high-speed playback being variable in accordance with said reproduction speed.

Suzuki teaches a reproducing device adapted to play back video data recorded on an information recording medium wherein the screen is divided into a number of areas during high-speed playback, that number being variable in accordance with the reproduction speed (Col 9, lines 21-24 "the ability of the recording and reproducing system and the memory capacity may be changed as desired to perform search reproduction at a speed other than the above-mentioned speed" and Col 9, lines 28-32 "each of successive ten frames stored in the memory is divided into ten regions, and respective portions of the ten frames of reproduced image data are combined to form one frame of image data for tenfold-speed search").

As taught by Suzuki, a screen being divided into a number of areas during high-speed playback, the number being variable in accordance with the reproduction speed, is well known, and provides the user with a visual indication of both the frames being played at high speed, and of the rate of reproduction.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mishima et al in order to include a variable number of areas being displayed during high-speed reproduction in accordance with the reproduction speed.

Regarding claim 35, Mishima et al disclose a method for playing back video data recorded on an information recording medium comprising partially displaying different frames of said low resolution data within each of said areas (Col 37, lines 44-47 "the P4 picture is played back in the area 1, the P3 picture is played back in the area

2, the P2 picture is played back in the area 3, and the P1 picture is played back in the area 4 and the I picture in the area 5").

Regarding claim 36, Mishima et al disclose a method for playing back video data recorded on an information recording medium comprising: displaying a frame of said main track data during said normal playback, said screen during said normal playback being a single area (Col 15, lines 13-16 "at the time of the normal playback, the data is rearranged on the basis of the address with the result that disadvantage resulting from the division of data can be prevented when played back").

Regarding claim 37, Mishima et al disclose a method for playing back video data recorded on an information recording medium comprising: setting said reproduction speed at a predetermined acceleration (Col 16, lines 60-64 "at the time of the special playback, the data to be accessed decreases so that a smooth special playback can be obtained by gradually decreasing the data amount to be accessed at the time of the special playback").

Regarding claim 38, Mishima et al disclose a method for playing back video data recorded on an information recording medium wherein, within the step of reading out said video data, said video data is read out at said reproduction speed (Col 16, lines 60-64 "at the time of the special playback, the data to be accessed decreases so that a smooth special playback can be obtained by gradually decreasing the data amount to be accessed at the time of the special playback").

Regarding claim 39, Mishima et al disclose a method for playing back video data recorded on an information recording medium wherein a time period to decode

said low resolution data is shorter than a time period to decode said main track data (Col 55, lines 25-29 “when only the low resolution component is arranged in summary at the front of the GOP, the ratio of the L component occupying the whole largely reduces so that an allowance can be made in the reading speed from the medium so that the skip search can be easily realized”).

Regarding claim 40, Mishima et al disclose a method for playing back video data recorded on an information recording medium wherein said main track data and said low resolution data are on said information recording medium (Col 1, lines 14-16 “a digital video signal record and playback device for recording and playing back on a medium such as an optical disc”).

Regarding claim 41, Mishima et al disclose a method for playing back video data recorded on an information recording medium wherein said main track data and said low resolution data are intermittently recorded on a physically same track of said information recording medium (Col 55, lines 11-20 “FIG. 65 is a view showing an example of the result of data constitution… In the sequence c, symbol C denotes a component coded by a rough quantization, and A a residual component by the rough quantization, respectively” and Col 70, line 66 – Col 71, line 4 “The video bitstream is extracted and inputted to the multiplexer 142. The multiplexer 142 sends the low resolution component data to the second variable-length decoder 145 while sending other data items to the first variable-length decoder 144 via the switch 143”).

Regarding claim 42, Mishima et al disclose a method for playing back video data recorded on an information recording medium comprising:

- calculating an acceleration in accordance with time required to read out and decode said main track data, said acceleration being calculated at a transition from said high-speed playback to said normal playback (Col 16, lines 60-64 “at the time of the special playback, the data to be accessed decreases so that a smooth special playback can be obtained by gradually decreasing the data amount to be accessed at the time of the special playback”).

Suzuki teaches calculating an acceleration in accordance with time required to read out and decode said main track data (Col 7, lines 2-7 “the data is intermittently read out from the disc 113 by the predetermined amount in the normal reproduction mode. At the time of search reproduction, the data is continuously read out from the magneto-optical disc 113. In this manner, the data is reproduced at a rate several times higher than the rate in the normal reproduction mode”) so as to perform deceleration at a deceleration corresponding to said calculated acceleration (Col 6, lines 42-50 “at the time of normal reproduction, the CPU 122 rearranges, in the order shown by reference numeral 301 in FIG. 3, the reproduced data decoded in the order indicated by reference numeral 302 in FIG. 3 and stored in the memory 205, and outputs the rearranged data. Thus, the order of reproduced image data is changed by using the memory 205 and, accordingly, the memory 205 is capable of storing several frames (ten frames in this embodiment) of decoded image data”).

As taught by Suzuki, calculating an acceleration factor allows the reproducing device to determine the appropriate data reading rate for the high-speed reproduction, and to return to a normal reading rate when high-speed reproduction is completed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mishima et al in order to include a calculation of acceleration factor and to use that calculation for accelerated and normal playback transitions.

Regarding claim 44, Mishima et al disclose a method for playing back video data recorded on an information recording medium comprising:

- fixing an arrangement of said screen upon termination of acceleration and deceleration (Col 15, lines 13-16 " at the time of the normal playback, the data is rearranged on the basis of the address with the result that disadvantage resulting from the division of data can be prevented when played back"), said fixed arrangement being in accordance with said reproduction speed presently existing (Col 15, lines 13-16 " at the time of the normal playback, the data is rearranged on the basis of the address with the result that disadvantage resulting from the division of data can be prevented when played back"); and
- performing said normal playback (Col 15, lines 13-16 " at the time of the normal playback, the data is rearranged on the basis of the address with the result that disadvantage resulting from the division of data can be prevented when played back").

Regarding claim 45, Mishima et al disclose a recording medium on which a program readable by a computer is recorded, the program being for playing back video

data recorded on an information recording medium, the program comprising the steps of:

- setting a reproduction speed of the video data (Col 37, line 36 “special playback is performed”), said reproduction speed during a high-speed playback being higher than said reproduction speed during a normal playback (Col 29, lines 54-55 “a 15 times speed special playback picture can be obtained”);
- reading out said video data from the information recording medium (Col 27, lines 53-55 “video information read from the recording medium is inputted from an input terminal 20 to a demodulator 21”), said video data including main track data being read out during said normal playback and low resolution data being read out during said high-speed playback (Col 20, lines 39-43 “At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the device so that a rough picture can be decoded by decoding only the coded data of low resolution”); and
- wherein an output image from said video data is viewable on said screen (Col 33, lines 38-40 “the data which can be read is decoded in units of macroblocks and is outputted as a high speed playback picture”).

Mishima et al also disclose:

- calculating an acceleration in accordance with time required to read out and decode said low resolution data, said acceleration being calculated at a transition from said normal playback to said high-speed playback (Col 16,

lines 60-64 “at the time of the special playback, the data to be accessed decreases so that a smooth special playback can be obtained by gradually decreasing the data amount to be accessed at the time of the special playback”); and

- performing acceleration at said calculated acceleration (Col 17, lines 3-5 “regarding the data divided by a plurality of dividing means, the amount of data to be read can be adjusted in accordance with the special playback speed to cope with a wide scope of the special playback speed”).

Further, Mishima et al also disclose the screen divided into a number of areas (Col 37, lines 44-47 ‘the P4 picture is played back in the area 1, the P3 picture is played back in the area 2, the P2 picture is played back in the area 3, and the P1 picture is played back in the area 4 and the I picture in the area 5”), but does not explicitly disclose the number during high-speed playback being variable in accordance with said reproduction speed.

Suzuki teaches a reproducing device adapted to play back video data recorded on an information recording medium wherein the screen is divided into a number of areas during high-speed playback, that number being variable in accordance with the reproduction speed (Col 9, lines 21-24 “the ability of the recording and reproducing system and the memory capacity may be changed as desired to perform search reproduction at a speed other than the above-mentioned speed” and Col 9, lines 28-32 “each of successive ten frames stored in the memory is divided into ten regions, and respective portions of the ten frames of reproduced

image data are combined to form one frame of image data for tenfold-speed search").

As taught by Suzuki, a screen being divided into a number of areas during high-speed playback, the number being variable in accordance with the reproduction speed, is well known, and provides the user with a visual indication of both the frames being played at high speed, and of the rate of reproduction.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mishima et al in order to include a variable number of areas being displayed during high-speed reproduction in accordance with the reproduction speed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is (571)270-1116. The examiner can normally be reached on IFT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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